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IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for wirelessly communicating a packet over a wideband communication channel comprising a plurality of orthogonal frequency division multiplexed (OFDM) channels, the method comprising communicating:

a channelization field on a single OFDM channel identifying which of the OFDM channels that are used for communicating subsequent wideband fields of the packet; and

a wideband-header field on each the identified OFDM channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,

wherein the OFDM channels that comprise the wideband channel are separated in frequency from each other.

2. (Currently Amended) The method of claim 1 wherein the communicating comprises:

communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels; and

communicating the wideband-header field on the identified channels including the single compatibility channel,

wherein the single compatibility channel comprises a single OFDM channel.

3. (Original) The method of claim 1 wherein the communicating comprises communicating a wideband-training field as part of the packet following the channelization field, the wideband-training field comprising a training sequence on the channels identified by the channelization field.

4. (Original) The method of claim 3 wherein when the wideband-header field includes an indication of a presence of the wideband-data field, the communicating further comprises

communicating the wideband-data field as part of the packet on the channels identified by the

channelization field.

5. (Currently Amended) <u>A method for communicating a packet comprising</u>

<u>communicating:</u>

<u>a channelization field identifying channels that are used for communicating subsequent</u>

<u>wideband fields of the packet; and</u>

<u>a wideband-header field on the identified channels to identify sub-fields present in the</u>

<u>wideband-header field and the presence of a wideband-data field following the wideband-header</u>

<u>field,</u>

<u>wherein the communicating comprises communicating a wideband-training field as part</u>

<u>of the packet following the channelization field, the wideband-training field comprising a</u>

<u>training sequence on the channels identified by the channelization field, and</u>

<u>wherein the method</u> ~~The method of claim 3~~ further ~~comprising~~ <u>comprises</u> estimating at

least one of a timing offset, fine-frequency offset, and channel response using at least the training

sequence for processing subsequent wideband fields of the packet including the wideband-header

field and the wideband-data field when included within the packet.

6. (Original) The method of claim 2 wherein the communicating comprises one of either

sending the packet by a transmitting communication unit or receiving the packet by a receiving

communication unit, and

wherein the identified channels, including the compatibility channel, comprise symbol-

modulated subcarriers.

7. (Original) The method of claim 1 wherein the wideband-header field is encoded with a

predetermined encoding scheme and modulated with a predetermined modulation scheme,

wherein the predetermined modulation scheme comprises one of either BPSK or QPSK

modulation, and wherein the predetermined encoding scheme comprises a ½ rate convolution

code.

8. (Currently Amended) <u>A method for communicating a packet comprising communicating:</u>

<u>a channelization field identifying channels that are used for communicating subsequent wideband fields of the packet; and</u>

<u>a wideband-header field on the identified channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,</u>

<u>wherein the communicating comprises:</u>

<u>communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels;</u>

<u>communicating the wideband-header field on the identified channels including the compatibility channel; and</u>

~~The method of claim 2 wherein the communicating further comprises~~ communicating a short-compatibility field as part of the packet on the compatibility channel, wherein the short-compatibility field includes length information defining a length of the packet, wherein communications units refrain from transmitting on the identified channels during transmission of the packet.

9. (Currently Amended) <u>A method for communicating a packet comprising communicating:</u>

<u>a channelization field identifying channels that are used for communicating subsequent wideband fields of the packet; and</u>

<u>a wideband-header field on the identified channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,</u>

<u>wherein the communicating comprises:</u>

<u>communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels;</u>

<u>communicating the wideband-header field on the identified channels including the compatibility channel; and</u>

~~The method of claim 2 wherein communicating further comprising~~ communicating a long-compatibility field on the compatibility channel, the long-compatibility field comprising a variable number of symbols over a plurality of symbol-modulated subcarriers that comprise at least one of the channels,

wherein the long-compatibility field includes information to reserve at least one of the channels for a time period, wherein a narrower-band communication unit refrains from communicating during the time period in response to receipt of the long-compatibility field.

10. (Original) The method of claim 9 wherein the long-compatibility field and the channelization field of the packet are sent on the compatibility channel, and

wherein a wideband-training field, the wideband-header field and, when included, a wideband-data field are sent on the identified channels including the compatibility channel.

11. (Currently Amended) <u>A method for communicating a packet comprising communicating:</u>

<u>a channelization field identifying channels that are used for communicating subsequent wideband fields of the packet; and</u>

<u>a wideband-header field on the identified channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,</u>

<u>wherein the communicating comprises:</u>

<u>communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels; and</u>

<u>communicating the wideband-header field on the identified channels including the compatibility channel,</u>

~~The method of claim 2~~ wherein the compatibility channel is relocatable to any one of a plurality of narrow-band channels within the allocated portion of spectrum, and

wherein the method further comprises<u>:</u>

scanning channels for the operation of narrower-band communication units, and

selecting one of the channels as the compatibility channel based on an overlapping use by at least some of the narrower-band communication units.

12. (Currently Amended) <u>A method for communicating a packet comprising</u> <u>communicating:</u>

<u>a channelization field identifying channels that are used for communicating subsequent wideband fields of the packet; and</u>

<u>a wideband-header field on the identified channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,</u>

~~The method of claim 1~~ wherein the wideband-header field comprises:

a field to request bit-loading per subcarrier for subsequent transmission by a transmitting communication unit of a wideband-data field of a packet, the bit-loading per subcarrier indicating a modulation scheme for transmission of the individual symbol-modulated subcarriers of the identified channels;

a field to request a coding rate for the subsequent transmission of the wideband-data field; and

a field to request a power loading per subcarrier for the subsequent transmission of the wideband-data field.

13. (Original) The method of claim 12 wherein the wideband-header field comprises at least one of:

a field to indicate the presence of the wideband-data field;

a field to indicate a bit loading per subcarrier for the wideband-data field, the bit loading per subcarrier indicating a modulation scheme used for transmission of the individual symbol-modulated subcarriers of the identified channels;

a field to indicate a power loading per subcarrier for the wideband-data field, the power loading per subcarrier indicating a transmission power level used for transmission of the individual symbol-modulated subcarriers of the identified channels; and

a field to indicate coding rates for decoding the wideband-data field.

14. (Original) The method of claim 13 wherein the wideband-header field comprises a parameter mask to identify fields present in the wideband-header field and the presence of the wideband-data field.

15. (Original) The method of claim 14 further comprising:

receiving selected individual subcarrier modulation assignments in the wideband-header field, the subcarrier modulation assignments being selected based on channel characteristics measured during a receipt of the wideband-channel training field on the identified channels at a receiving communication unit; and

individually modulating subcarriers of the identified channels for transmission based on the selected individual subcarrier modulation assignments received in the wideband-header field.

16. (Original) The method of claim 1 wherein the communicating comprises:

communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels;

communicating the wideband-header field on the identified channels including the compatibility channel;

communicating a wideband-training field as part of the packet following the channelization field, the wideband-training field comprising a training sequence on the channels identified by the channelization field; and

communicating a long-compatibility field on the compatibility channel, the long-compatibility field comprising a variable number of symbols over a plurality of symbol-modulated subcarriers that comprise at least one of the channels,

wherein the long-compatibility field includes information to reserve at least one of the channels for a time period, wherein a narrower-band communication unit refrains from communicating during the time period in response to receipt of the long-compatibility field,

wherein the wideband-header field comprises:

a field to request bit-loading per subcarrier for subsequent transmission by a transmitting communication unit of a wideband-data field of a packet, the bit-loading per subcarrier

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indicating a modulation scheme for transmission of the individual symbol-modulated subcarriers of the identified channels;

a field to request a coding rate for the subsequent transmission of the wideband-data field; and

a field to request a power loading per subcarrier for the subsequent transmission of the wideband-data field.

17. (Original) The method of claim 16 wherein when the wideband-header field includes an indication of a presence of the wideband-data field,

the communicating further comprises communicating the wideband-data field as part of the packet on the channels identified by the channelization field,

wherein the method further comprising estimating at least one of a timing offset, fine-frequency offset, and channel response using at least the training sequence for processing subsequent wideband fields of the packet including the wideband-header field and the wideband-data field when included within the packet,

wherein the compatibility channel is relocatable to any one of a plurality of narrow-band channels within the allocated portion of spectrum, and

wherein the method further comprises:

scanning channels for the operation of narrower-band communication units;

selecting one of the channels as the compatibility channel based on an overlapping use by at least some of the narrower-band communication units;

receiving selected individual subcarrier modulation assignments in the wideband-header field, the subcarrier modulation assignments being selected based on channel characteristics measured during a receipt of the wideband-channel training field on the identified channels at a receiving communication unit; and

individually modulating subcarriers of the identified channels for transmission based on the selected individual subcarrier modulation assignments received in the wideband-header field.

18. (Original) The method of claim 17 wherein the communicating comprises one of either sending the packet by a transmitting communication unit or receiving the packet by a receiving communication unit,

wherein the identified channels, including the compatibility channel, are comprised symbol-modulated subcarriers, and

wherein the wideband-header field is encoded with a predetermined encoding scheme and modulated with a predetermined modulation scheme, wherein the predetermined modulation scheme comprises one of either BPSK or QPSK modulation, and wherein the predetermined encoding scheme comprises a ½ rate convolution code.

19. (Currently Amended) A wireless communication unit for communicating over a wideband communication channel comprising a plurality of orthogonal frequency division multiplexed (OFDM) channels, the wireless communication unit comprising:

a physical layer to communicate a packet comprising at least a channelization field on a single OFDM channel to identify which of the OFDM channels that are used for communicating subsequent wideband fields of the packet, and to communicate a wideband-header field on each of the identified OFDM channels, the wideband-header field to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field; and

a medium access control layer to select channels for communication by the physical layer and obtain access to the selected channels,

wherein the OFDM channels that comprise the wideband channel are separated in frequency from each other.

20. (Currently Amended) The communication unit of claim 19 wherein the physical layer is to communicate the channelization field on a compatibility channel of an allocated portion of spectrum comprising a plurality of channels, and is to communicate the wideband-header field on the identified channels including the compatibility channel,

wherein the compatibility channel comprises a single one of the OFDM channels.

21. (Original) The communication unit of claim 19 wherein the physical layer is to further communicate a wideband-training field as part of the packet following the channelization field, the wideband-training field comprising a training sequence on the channels identified by the channelization field.

22. (Original) The communication unit of claim 21 wherein when the wideband-header field includes an indication of a presence of the wideband-data field, the physical layer is to further communicate the wideband-data field as part of the packet on the channels identified by the channelization field.

23. (Currently Amended) A system for wirelessly communicating over a wideband communication channel comprising a plurality of orthogonal frequency division multiplexed (OFDM) channels, the system comprising:

an omnidirectional antenna;

a physical layer to communicate a packet with the omnidirectional antenna, the packet comprising at least a channelization field communicated on a single OFDM channel to identify which of the OFDM channels that are used for communicating subsequent wideband fields of the packet, and to communicate a wideband-header field on the identified OFDM channels, the wideband-header field to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field; and

a medium access control layer to select channels for communication by the physical layer and obtain access to the selected channels,

wherein the OFDM channels that comprise the wideband channel are separated in frequency from each other.

24. (Currently Amended) The system of claim 23 wherein the physical layer is to communicate the channelization field on a compatibility channel of an allocated portion of spectrum comprising a plurality of channels, and is to communicate the wideband-header field on the identified channels including the compatibility channel,

wherein the comparability channel comprises a single one of the OFDM channels.

25. (Original) The system of claim 23 wherein the physical layer is to further communicate a wideband-training field as part of the packet following the channelization field, the wideband-training field comprising a training sequence on the channels identified by the channelization field,

wherein when the wideband-header field includes an indication of a presence of the wideband-data field, the physical layer is to further communicate the wideband-data field as part of the packet on the channels identified by the channelization field.

26. (Currently Amended) A <u>computer-readable medium that stores instructions for execution</u> <s>machine-readable medium that provides instructions, which when executed</s> by one or more processors, cause said processors to perform operations <s>comprising</s> <u>for wirelessly</u> communicating a packet <u>over a wideband communication channel comprising a plurality of orthogonal frequency division multiplexed (OFDM) channels including communicating</u> <s>comprising</s> a channelization field <u>on a single OFDM channel</u> identifying <u>which of the OFDM</u> channels that are used for communicating subsequent wideband fields of the packet, and further comprising a wideband-header field on <u>each of</u> the identified <u>OFDM</u> channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field<u>,</u>

<u>wherein the OFDM channels that comprise the wideband channel are separated in frequency from each other</u>.

27. (Currently Amended) The <u>computer-readable</u> <s>machine-readable</s> medium of claim 26 wherein the instructions, when further executed by one or more of said processors cause said processors to perform operations further comprising:

communicating the channelization field on a single compatibility channel of an allocated portion of spectrum comprising a plurality of channels; and

communicating the wideband-header field on the identified channels including the compatibility channel<u>,</u>

<u>wherein the single compatibility channel comprises one of the single OFDM channels</u>.

28. (Currently Amended) The computer-readable machine-readable medium of claim 26 wherein the instructions, when further executed by one or more of said processors cause said processors to perform operations further comprising communicating a wideband-training field as part of the packet following the channelization field, the wideband-training field comprising a training sequence on the channels identified by the channelization field.

29. (Currently Amended) The computer-readable machine-readable medium of claim 28 wherein the instructions, when further executed by one or more of said processors cause said processors to perform operations wherein when the wideband-header field includes an indication of the presence of the wideband-data field, the communicating further comprises communicating the wideband-data field as part of the packet on the channels identified by the channelization field.

30. (Currently Amended) A wireless communication packet for communication over a wideband communication channel comprising a plurality of orthogonal frequency division multiplexed (OFDM) channels, the packet comprising:

a channelization field communicated on a single OFDM channel identifying which of the OFDM channels that are used for communicating subsequent wideband fields of the packet; and

a wideband-header field for communication on each the identified OFDM channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field,

wherein the channels comprise a plurality of substantially orthogonal symbol-modulated subcarriers,

wherein the OFDM channels that comprise the wideband channel are separated in frequency from each other.

31. (Currently Amended) The packet of claim 30 wherein the channelization field is for communication on a single compatibility channel assigned an allocated portion of spectrum comprising the plurality of channels, and

wherein the wideband-header field is for communication on the identified channels including the compatibility channel,

wherein the compatibility channel comprises one of the single OFDM channels.

32. (Original) The packet of claim 30 further comprising:

a wideband-training field to follow the channelization field, the wideband-training field comprising a training sequence for communication on the channels identified by the channelization field,

wherein when the wideband-header field includes an indication of the presence of the wideband-data field, the packet includes the wideband-data field for communication on the channels identified by the channelization field.

33. (Currently Amended) A communication packet comprising:

a channelization field identifying channels that are used for communicating subsequent wideband fields of the packet;

a wideband-header field for communication on the identified channels to identify sub-fields present in the wideband-header field and the presence of a wideband-data field following the wideband-header field, wherein the channels comprise a plurality of substantially orthogonal symbol-modulated subcarriers; and

~~The packet of claim 30 further comprising~~ a long-compatibility field for communication on the compatibility channel, the long-compatibility field comprising a variable number of symbols transmitted over a plurality of symbol-modulated subcarriers that comprise the compatibility channel,

wherein the long-compatibility field includes information to reserve at least one of the channels for a time period, wherein a narrower-band communication unit refrains from communicating during the time period in response to receipt of the long-compatibility field.

34. (Cancelled)

35. (Currently Amended) A method comprising:

communicating a wideband-training field as part of a packet, the wideband-training field comprising a training sequence modulated on a plurality of symbol-modulated subcarriers on a plurality of channels;

communicating a wideband-header field on the channels, the wideband-header field to identify sub-fields present in the wideband-header field and to identify a presence of a wideband-data field;

communicating the wideband-data field as part of the packet on the channels when indicated in the wideband-header field; and

~~The method of claim 34 further comprising~~ communicating a short-compatibility field as part of the packet on the plurality of channels, wherein the short-compatibility field includes packet-length information defining a length of the packet, wherein narrower-band communication units refrain from communicating on the plurality of channels during the packet in response to the packet-length information.

36. (Currently Amended) A method comprising:

communicating a wideband-training field as part of a packet, the wideband-training field comprising a training sequence modulated on a plurality of symbol-modulated subcarriers on a plurality of channels;

communicating a wideband-header field on the channels, the wideband-header field to identify sub-fields present in the wideband-header field and to identify a presence of a wideband-data field;

communicating the wideband-data field as part of the packet on the channels when indicated in the wideband-header field; and

~~The method of claim 34 further comprising~~ estimating at least one of a timing offset, fine-frequency offset, and channel response using at least the training sequence for processing subsequent wideband fields of the packet including the wideband-header field and the wideband-data field when included within the packet.

37. (Currently Amended) The method of claim 35 [[34]] wherein the wideband-header field is encoded with a predetermined encoding scheme and modulated with a predetermined

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modulation scheme, wherein the predetermined modulation scheme comprises one of either

BPSK or QPSK modulation, and wherein the predetermined encoding scheme comprises a ½

rate convolution code.